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ABSTRACT

This report summarizes the findings of a Unesco-sponsored study designed to identify quantitative relationships between mass communication and economic growth in the Federal Republic of Germany. The first and second sections of the report outline the most important economic and social lines of development in Germany from the end of the nineteenth century to the present. The third section presents the major findings of the study concerning (1) the mass media in general; (2) newspaper, magazine, and book production; (3) the development of communications technology; (4) distribution factors; (5) transportation of printed products in the country; (6) the development of private consumption of printed materials and of advertising; (7) foreign trade with printed products; and (8) economic indicators for the press and their importance for the German economy as a whole. The final section of the report offers a brief discussion of the implications of the study's findings and presents proposals for follow up studies.
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COMMUNICATION INDICATORS

II. 100 YEARS OF MASS COMMUNICATION IN GERMANY

An ex-post analysis of the socio-
economic interdependence of the mass
media - especially the press - in
the German Reich and in the Federal
Republic of Germany with a glance at
parallels and differences in
developing countries

Summary of a study made by

Anton Gälli
and
Kurt Vogler

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PREFACE

In February 1976, Unesco convened its first consultation specifically devoted to the subject of communication indicators. Staff members from the Institute of Development Studies of the University of Sussex (U.K.) and from the IFO Institute of Economic Research (Federal Republic of Germany) took part in the consultation. As a result of the meeting, research contracts were established with the two institutions.

The study undertaken by the Sussex group was submitted to Unesco two years later under the title "Communication Indicators and Indicators of Socio-Economic Development, 1960-1970". Meanwhile, the IFO group submitted a national case study "One Hundred Years of Mass Communication in Germany".

While the first study involved a careful process of data selection to allow for cross-national comparability among the countries included in the report, the German study was based entirely on a large amount of national data which enabled the researchers to undertake a very detailed analysis.

Although the two studies have used quantitative indicators, it does not necessarily mean that communication indicators need only be quantitative. The studies are exploratory in nature and are both obviously limited to an analysis of existing and available data.

A second consultation on communication indicators held in Paris from 11 to 15 December 1978 discussed the various approaches to the use of indicators in studying communication phenomena generally and with particular reference to their role in the formulation of national communication policies, thereby providing Unesco with some guidelines to follow in its future programming; to identify some of the main methodological problems to be taken into account by Unesco in commissioning future studies in the field of communication development; describe the scope and limitations of cross-national comparability of communication systems through the use of indicators identify the most significant parts of the two studies and to recommend future action in the field of communication indicators with special emphasis on the role of Unesco in assisting Member States in their efforts at communication research and policy formulation.

It is with satisfaction that we are able to publish summaries of these two interesting studies in the present series of Communication and Society. This is the summary version of the study: "100 Years of Mass Communication in Germany". The original study was written by Anton Gälli with a contribution by Kurt Vogler under a Unesco contract, established with the IFO Institute for Economic Research, Munich.

The study is not an official document of the country it refers to. The views stated therein are the author's and do not necessarily represent the official views of the Federal Republic of Germany.

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PART 1

INTRODUCTION

This study was carried out for Unesco by the IFO Institute of Economic Research in Munich, to investigate possible correlations between socio-economic development and the mass media in a fully industrialized country which possesses adequate statistical material on both subjects over a sufficient period of time.

Undertaken by the Department for Development Studies with the help of the Business Survey Department, this pilot study aimed to identify quantitative relationships between mass communication and economic growth in the Federal Republic of Germany through ex-post analysis of their correlation. It also tried to formulate and test basic correlation hypotheses concerning socio-economic indicators; examine the implication of different media technologies and enquire into some aspects of the promotion of the media. In addition to these objectives, the researchers also attempted to provide indications concerning the possibilities, limitations, and transferability aspects of this type of research to developing countries.

This summary sums up the most important results of this study and delineates its limitations. Analyses of the results reveal the degrees of importance of the various positive and negative influences affecting the press. Furthermore on the basis of these investigations into specific areas of the economy, it is possible to define more clearly the position taken by the mass media, in particular by newspapers, magazines, and books in the economy as a whole.

In order to obtain as wide a perspective as possible, the researchers decided to include the Germany of the late nineteenth and twentieth centuries. This gave them the opportunity of including development on certain sectors, which have become the focus of topical interest in some of the Third World countries.

Thus the study attempts, on the one hand, to provide a survey of the historic problems, and interdependence of the German mass media in the course of a century, and, on the other hand, to look for parallels in developing countries for the most important indicators.

Data on the development of the textile industry has been included wherever possible for purposes of comparison. This sector is one of the most rapidly developing industries in nearly every Third World country, is relatively well researched statistically speaking and can therefore provide a suitable parameter.

At the same time an attempt had been made to investigate the economic and social relationship of mass communication to the economy as a whole with a view to obtaining a clearer definition of the position it occupies. Lack of both data and time, however, made it impossible to deal with the particularly interesting social implications at sufficient length. The emphasis is thus on the economic sector, whereas social aspects have been taken up whenever justified by the available material.

In view of the broad range covered by mass communication and of the lack of adequate statistical data even in the Federal Republic, it proved necessary to place greater stress than intended on the press sector, in particular on newspapers, magazines, and books; media which have the longest tradition both in the industrial and the developing countries.

In course of the investigations carried out by the researchers, the calculation of pertinent correlation-coefficients based on overall socio-economic indicators could not be carried out to the extent intended, partly because of the lack of continuity (statistical limitations) and partly due to inadequate statistical data. An attempt has however been made by the researchers to compare at least some specific figures with the larger economic sectors, and to correlate them with some overall figures.

Although it would have been interesting to extend the period under consideration further back to the beginning of industrialization in Germany, that is to about the 1840's, this was made impracticable due to the fact that statistics covering the whole of the German Reich are not available for any period prior to 1870. The political milestone formed by the founding of the Empire in 1871 also made the 1870's seem a suitable point at which to begin. Thus the detailed analysis of mass communication in this study is essentially limited to the time from 1875-1975. The introductory survey goes back further in time in order to expose the roots of the development more clearly.

The two World Wars form abrupt interruptions of the otherwise continuous line of data. This introduces an element of discontinuity which has a distorting effect on the five years or so following each of the wars. For statistical reasons the emphasis of the study lies in the period 1950-1975. It should be noted that pre-First World War statistics leave a lot to be desired, so that present calculations often have to be based on rather inaccurate secondary data. Thus the printing and allied trades, for example, are much less accurately recorded in that period than the paper industry. There are inadequacies even in the time of the Weimar Republic (1919-1933) and in the subsequent Third Reich period. Another fact that must be taken into account is that the territory of the Federal Republic of Germany is not identical with that of the German Empire, which is another source of discontinuity.

Media statistics are still a neglected area, also in the Federal Republic of Germany; and it was not until the 1970's that a serious effort was made to improve the situation in order to prepare the ground for a comparative survey. Long time series as presented in the study are therefore approximative values of the real development. The varying terms of reference of the individual sources make it impossible to work out anything more satisfactory.

The study falls into six parts. Chapter I depicts the most important economic and social lines of development from the end of the nineteenth century to the present day. The accompanying tables contain the relevant data on population growth, gross national product, private consumption, etc. Chapter II outlines the history, the organizational forms, structure, and production figures of the press (newspaper, magazines, and books), of broadcasting (radio and television), and of the film industry. A further chapter analyses the importance of advertising to all these media and traces its development. Chapter IV forms the core of the study. It deals mainly with the press: the areas of production, technology, distribution, foreign trade, and consumption are analysed in detail and related to larger areas of the economy. A summary in Chapter V contains the most important results and reveals relationships with the economy as a whole. Chapter VI is an attempt to discover parallels to, and differences between, conditions in the Federal Republic and the developing countries; and makes proposals for follow-up studies. A comprehensive bibliography lists the scientific sources at present available on the subject.

SOCIO-ECONOMIC INFLUENCES

The course of German history in the last hundred years has been determined mainly by rapid industrialization, the foundation of the Reich, and the two World Wars. The survey of the press undertaken in this study show a number of interior and exterior influences directly and indirectly affecting this sector and its position in the economy as a whole. Table 1 reveals the principal factors affecting development throughout a century. Four phases stand out relatively clearly as characteristic for the press in Germany and in the Federal Republic. These comprise of the constructive period during the German Reich before the First World War; the period of consolidation during the Weimar Republic 1920-1933; the period of crisis during the Third Reich before the Second World War, and finally, a period of stabilization at a new level from 1950 to 1975.

The manner and course taken by these phases are such that they could also be characteristic for other countries in essential points as they embrace a cycle of growth. The study also reveals certain restricting and stimulating factors influencing the development of the press.

Stimulating elements include a broad degree of freedom in the state with guaranteed freedom of the press, subsidies in the form of tax relief, credits, to aid distribution (Post Office rates) as well as the encouragement of free enterprise with simultaneous controls to avoid over-concentration, and state aid for smaller and medium-sized firms. Another indirect promotional element connected with German history and the specific character of the Federal Republic of Germany is federalism which has various positive effects on ensuring a variety of products in the newspaper industry.

Economic factors with a stimulating effect are a high rate of investment and a high level of technology, including the internationally recognized quality of German printing and papermaking machines and the rapid overall economic growth rate in the Federal Republic which has a positive effect on the development of incomes and on the volume of advertising.

Social factors are also of decisive importance. This applies to the population increase, the degree of urbanization, education, interest in cultural affairs, a high proportion of leisure time and the high level of income spread throughout the population.

Restricting elements can essentially be defined as a lack of stimulating factors. Among the individual factors which have a particularly noticeable negative effect are press censorship, the "co-ordination" of the press by a one-party state, the nationalization of press enterprises, and drastic suppression of free enterprises.

In the economic field, apart from periods of recession, there are, above all, concentration, which reduces the variety of press products available, too much rationalization, which can damage the interests of the customers by affecting distribution, for example, and too great a dependence on advertising, which often makes medium-sized businesses unviable. Competition, despite all its advantages, within the press and with the other media has also had a negative influence especially on small and medium-sized businesses.

On the consumer front, there is the increasing degree of saturation of households with press products, the competition from the other media, for example, the increasing restraint due to financial reasons or when the television distracts from book reading. A further important factor was the diminished party influence which led to a reduction in the ideological press, which in turn has negative results on the general range of reading matter offered.

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Table 1

Factors influencing the press and their effects 1875 - 1975

Phases	Political factors	Economic factors	Social factors	Effects
1875-1913 Constructive period	- gradual abolition of censorship - joint-stock companies allowed - free enterprise - gradual development of parties - cultural policy has stimulating effect	- industrialization - technological advance - expansion of transport - greater use of energy - shorter working hours	- rapid growth in population - spread of education - increased incomes - urbanization	- rapid and disproportionate growth in number of titles and size of editions of books, newspapers, and magazines
1920-1933 Period of consolidation	- official freedom of the press - growing influence of the parties; they split up into factions - little encouragement of small and medium-sized businesses - aftermath of war	- economic crisis - rationalization - further reduction of working hours - further, increased use of technology and energy - growth in advertising - beginning of motorization	- Slowing down in population growth rate - unemployment - more leisure time - social unrest - cultural boom - moderate incomes	- number of titles of books, newspapers and magazines begins to drop - circulations continue to grow - signs of saturation at low level - growth in ideological press - beginning of press concentration
1933-1939 Crisis period	- abolition of press freedom - press becomes instrument for political propaganda - direct and indirect nationalization of the press - frozen prices - national unity party	- economic stabilization - drop in advertising - drop in exports - increased use of energy and technology - paper rationing - beginning of planned economy	- renewed increase in population growth - relatively stable, increasing incomes - beginning of "inner emigration" - increasing consumption	- rapid decrease in number of titles of newspapers, magazines; books, technical and professional magazines remain relatively stable - all press products, with a few discreet exceptions are "brought into line" - press concentration spreads
1950-1975 Stabilization at a new level	- official freedom of the press - first strong encouragement of press (Post rates, halving of VAT) then less - free enterprise - party influence diminishes - growing influence of pressure groups - relatively little encouragement of small and medium-sized firms licensing	- high investments - automatization of production processes - high rate of employment only recently reduced - export growth - increasing demand for durable consumer goods - advertising boom - boom in individual transport - great expansion of the entire system of communications: radio and television, which threatens film business - rationalization, which also threatens the quality of distribution - recession from 1967/68 - recession from 1972/73	- at first rapid, then more stable, now falling population growth - increasing incomes and wider distribution of wealth - growth in consumption - rapid increase in leisure time - expansion of general education - parallel to this: cultural boom - increase in number of students and pensioners - growing female emancipation	- rapid growth in size of editions of books, newspapers and magazines (greater for entertaining magazines than for technical or professional ones) - drop in number of journalistic units for daily newspapers - reduction in ideological press - increasing concentration of the press - higher circulations limited to fewer large newspapers and magazines - less variety among the regional papers - increase of monopoly newspapers in the regional press - increased dependence on advertising - increasing competition between newspapers and magazines - increasing friction with television concerning advertising - market largely saturated

(1) The licence-system introduced immediately after the war by the Allies, had a great influence on the whole period.

PART III

IMPORTANT RESULTS IN VARIOUS FIELDS

Mass media in general

In the 100 years under research, each of the media took a different development, but with most specific characteristics. The press (see figure 1) is generally subject to more fluctuations than broadcasting. The latter arrived to be with its programmes the information-consumer-goods par excellence; the growth-curve of broadcasting as well as of television practically progressed in a continuous way, attaining a nearly complete saturation.

While this fast developing broadcasting did not affect the whole press sector, the decline of book readers, caused by television habits, was at least partly compensated by reading of programme magazines and by procuring of additional information out of newspapers. The effect on films on the other hand was almost disastrous (see in this regard the following explanations, figure 2). Obviously the most sensitive recession of the whole film industry was caused for the greatest part by the increasing TV consumption. Though during the last years a certain consolidation on a low level can be observed, a new rise in the forthcoming years seems out of the question. A decisive role in this decline might also be played by the fact that the film in contrast to the other mass media, especially broadcasting and television, but also newspapers and public magazines, profited least from advertising. Only books and technical magazines are forced to manage without accruing from advertising, but in these cases, cost-covering prices can be obtained.

The attempt to link incomes from advertising of the considered mass media with the GDP or private consumption did not lead to a significant correlation. At the same time it must be pointed out that figures concerning incomes from advertising are subject to considerable errors. Generally this field lacks reliable data.

On the other hand, the development of the media taken as a whole (daily press and public magazines circulation, the titles of book production, radio-listeners, television viewers and cinema patrons), is closely linked with the growth of GDP and especially with the growth of the private consumption, whereas the development of the press sector and in particular the development of public magazines shows a closer correlation with the growth of the GDP.

Production

The development of production can only be traced back to the last century for the sector paper manufacture and processing, but the figures for this sector also represent to a certain extent those of the printing industry.

The index of production in the paper manufacturing and processing industry increased from 9.2 to 100 points in the period 1873-1913, which was faster than the index for industry as a whole, which in the same period rose from 27.4 to 100. This sector had the fastest growth rate of all branches of industry until the first World War. Even after the First World War, the paper manufacturing and processing industry had an above-average development rate; a noticeable slowing down did not materialize until after 1937. The fact that the growth rate slowed down more markedly in the 30's is explained on the one hand by increasing saturation, and on the other hand by the system of paper quotas introduced under the Nazis as an instrument for controlling the press. A fact which is already suggested by the figures for the

Figure 1: Development of Press Indicators 1875-1975
(1913 = 100)

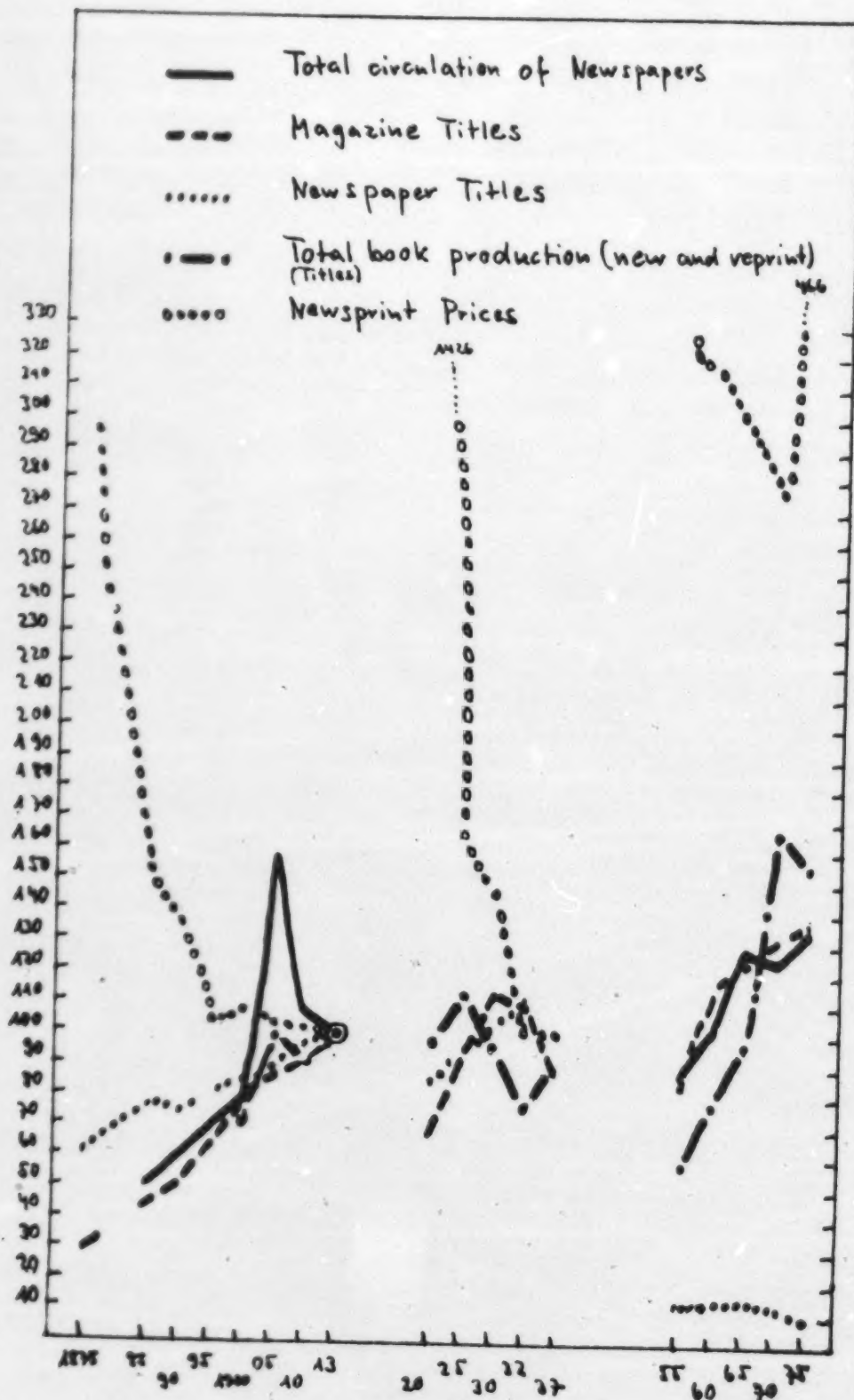
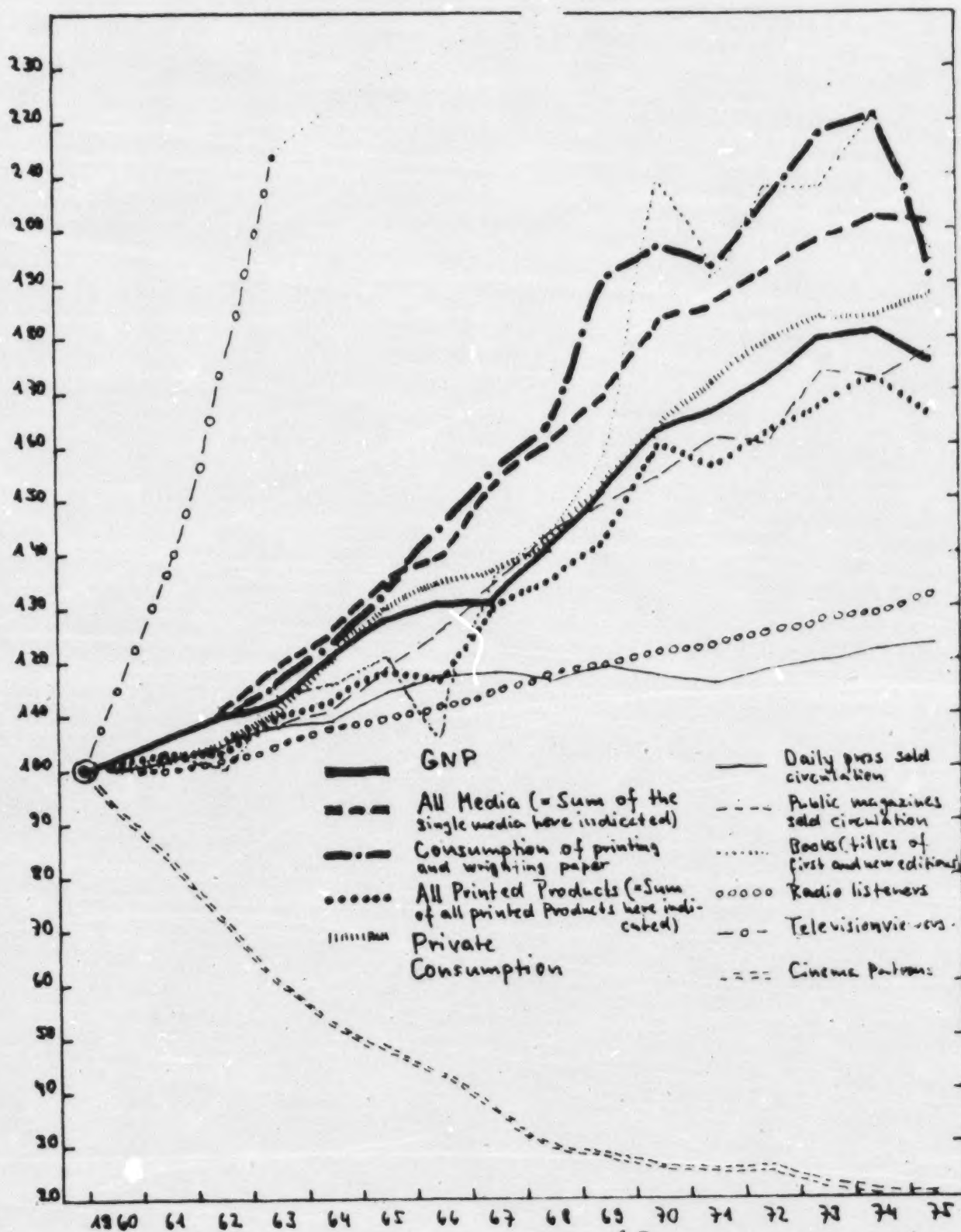


Figure 2: Development of Important Mass Media Compared with Overall Economic Indicators 1960-1975)

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1960 = 100



years 1925-1938 and is confirmed by the figures for the period 1950-1975. Growth in the German paper industry is very closely correlated with that of industry as a whole.

Production in the printing and duplicating industry in the last 25 years was slightly higher than in industry as a whole, but the growth rate was not as fast. Average rate of growth for the printing and duplicating industry was 5.9% p.a.; industry as a whole was 6.3% p.a. and the total economy was 5.7% p.a. Cyclical fluctuations in production in the printing and duplicating industry were as in the industrial sector generally greater than in the total economy.

If the two industries (paper and printing) are considered together, and their growth followed from after the Second World War to the present, then their growth curve can be taken as a guide to growth of industry as a whole. Their share in total industrial production remained fairly constant. The part of the paper industry in industrial production as a whole varied between 1.2% and 1.4%, the somewhat higher contribution being that of the printing and duplicating industry between 2.9% and 2.5%.

The share of newspapers and magazines in the total production of the printing industry amounts to 36%. This did not change during the quarter century under consideration. The book industry's share of 9% of the production of the printing industry remained constant. Thus the production index for the printing industry at the same time accurately reflects the development of these two media.

Furthermore, it can be said that the development of the newspaper, magazine, and book production generally followed the same course taken by the economy as a whole.

Technology

The German press has always been one of the first in the world to profit from technical progress and in many cases has itself provided the stimulus for new developments. The home constructional engineering industry made decisive contributions towards this development.

Time series on levels of investment, use of machines, and the productivity of machines are scarcely available for the period before 1950. Therefore other figures were utilized to outline the influence of technology in that period.

Looking at the development of patents granted in the period between 1880 and 1959, it becomes evident that the paper industry is relatively closer correlated with the number of patents granted on the average to all spheres of the economy than the printing industry is. This is certainly connected with the fact that the paper industry is more varied and has thus given scope for a greater number of improvements. Its quantitative share of the total of patents granted is also on the average higher than that of the printing industry. However, in the printing industry there was an unusually high concentration of patents applied for in the years directly preceding the First World War and in the middle of the 1920's. The annual production of paper per machine in operation gives an idea of the rapid advance of technology in the sphere of paper manufacture. In 1900 it was 1,100 tons; by 1976 this had increased to 14,500 tons. A further indicator is the number of HP installed in the paper manufacturing and processing industry. In 1875 the figure was 54,000 HP, by 1939 the figure was 1,350,500. In the same period the amount of HP installed in the paper industry as a proportion of the total number installed in industry and the crafts as a whole dropped from 5.7% to 3.9%. These figures make it obvious,

that the amount of energy employed played a decisive role in the increase in productivity. In the period from 1907 to 1939 the number of HP installed rose by 231%, whereas in the years 1900 to 1937 the production of paper per machine in operation increased by 282%. There is thus a direct connection.

A better and more complete picture can be obtained for the period after 1950. The investment level, that is, the gross investment in plant and equipment compared with turnover, varied considerably in the paper and printing industry and only towards the end of the 1960's did a parallel line of development evolve (see Figure 3). A comparison also makes it clear that the printing industry showed an above average interest in investment. Technical innovations were particularly frequent in the middle of the 1950's and then again in 1959-1960 which is partly explained by the heavier concentration in some large concerns and the advance of offset printing. Development in the paper industry was below average up to 1966, though it was gradually catching up. But then a period of greater innovation started in 1969 after the recovery from the first German economic recession and continued to the present, though it levelled off to a certain extent.

The relatively low level of investment in the paper industry can be partly explained by the fact that it was unnecessary to introduce any revolutionary new technology in this sector. Added to this were low returns and competition from abroad. The introduction of photo-electronic composing in particular and the corresponding rotary machines called for large investments in the printing industry.

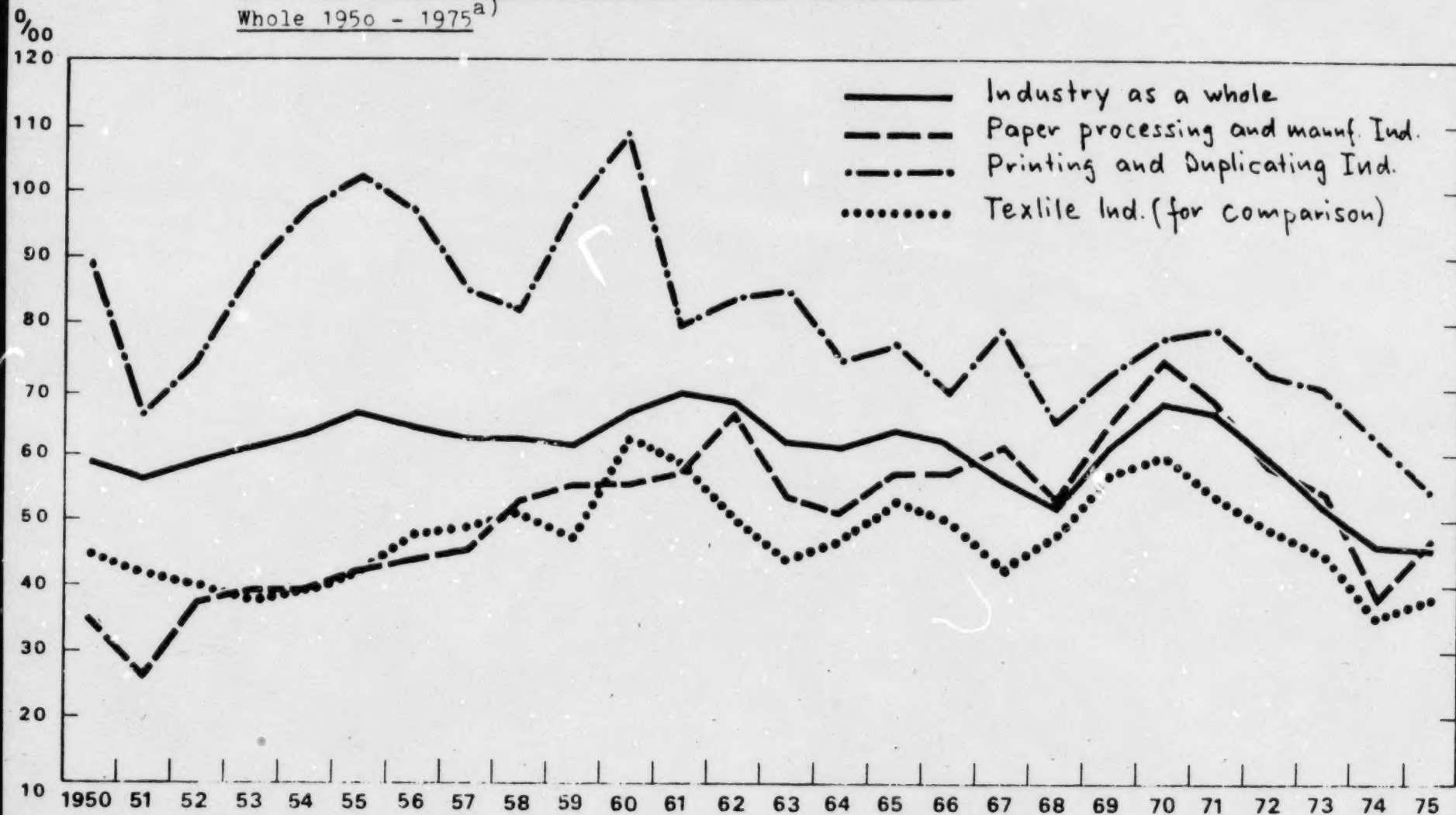
Distribution and trade

The lack of adequate statistical material also makes it difficult to trace the development throughout a whole century. A certain indication is implied in the increase in the trade in paper in comparison with that of trade in general. It also makes clear that the development of the turnover in the paper trade closely resembles that of trade as a whole (after the period of growth in the last quarter of the nineteenth century). In the period 1962-1976 a close correlation is revealed between the development of turnover in the retail trade as a whole. More positive developments in the trade with paper goods and printed products in relation to average trade as a whole are to be observed during periods of economic recession. While this affected the newspapers and magazine branch favourably during the years 1967-1968, it has been mainly to the advantage of books and technical journals since the early 1970's.

The overall structure of trade with high-grade paper and printed products has changed considerably in recent years. In 1968 the number of wholesale and retail firms and agencies had dropped by 13% below the 1960 figure - the most marked drop being in the agencies and wholesalers. But in the same period the number of persons employed increased by 10%. Growth was limited to the retail and wholesale trade; the intermediate trade suffered a substantial cut (-39%). The turnover in trade with high-grade paper and printed products grew in the period 1959-1967 more rapidly (+75%) than the turnover in trade as a whole (+62%). Wholesale trade, especially retail trade contributed towards this increase. The intermediate trade also suffered great losses in this sphere.

In the period under construction (1960-1968) trade in high-grade paper and printed products and the number of employed remained constant (1.3% of total trade); the share in the total turnover rose slightly in the 8 years from 0.89 to 0.96%.

Figure 3 : Development of the Investment level in the Paper Manufacturing and Processing Industry and of the Printing and Duplicating Industry compared with Industry as a Whole 1950 - 1975^{a)}



a) Gross Investments in Plant and Equipment in % of the Turnover

This again illustrates the relatively constant character of the trade in paper and printed products. In important areas its growth runs parallel to that of trade as a whole.

The focal points for the distribution of printed matter are the publishers, who often combine book and newspaper production and in many cases also more or less take over the distribution.

The growth of the entire publishing business in 1962-1974 measured by its turnover was unusually rapid compared with the growth of the larger sector of services provided by private firms and free-lance professions. The share of the publishing business rose in this period from 7.2% to 8.5%.

The difference between the various types of publishers is also very obvious. The most rapid development was in the turnover of firms publishing newspapers and entertaining magazines. There were also no noticeable drops in this branch during the recession years 1967-1968, a fact which emphasizes the relative independence of the newspapers from fluctuations in the economy. The situation in the book branch is different. Although the recession did not affect it as badly as other sections of the private and free-lance services industry the characteristic recessionary bend is nevertheless clearly seen.

Transport

Long-distance transportation of printed products in Germany has long been closely and sometimes almost exclusively connected with the postal system. It was not until the advent of the car and the accompanying more rapid development of private long-distance transport firms that a decisive change took place in this field. The development illustrated in Figure 4 shows the close correlation existing between newspaper dispatch and the whole of the postal dispatch in the years 1875-1913. The above-average growth rate is explained by the upward trend in the periodical press which began at this time. In the period after the First World War, when the newspaper market levelled out to a certain extent, the growth rate came closer to that of the dispatch business as a whole, and as a result of the Nazi press dictatorship it dropped to below average.

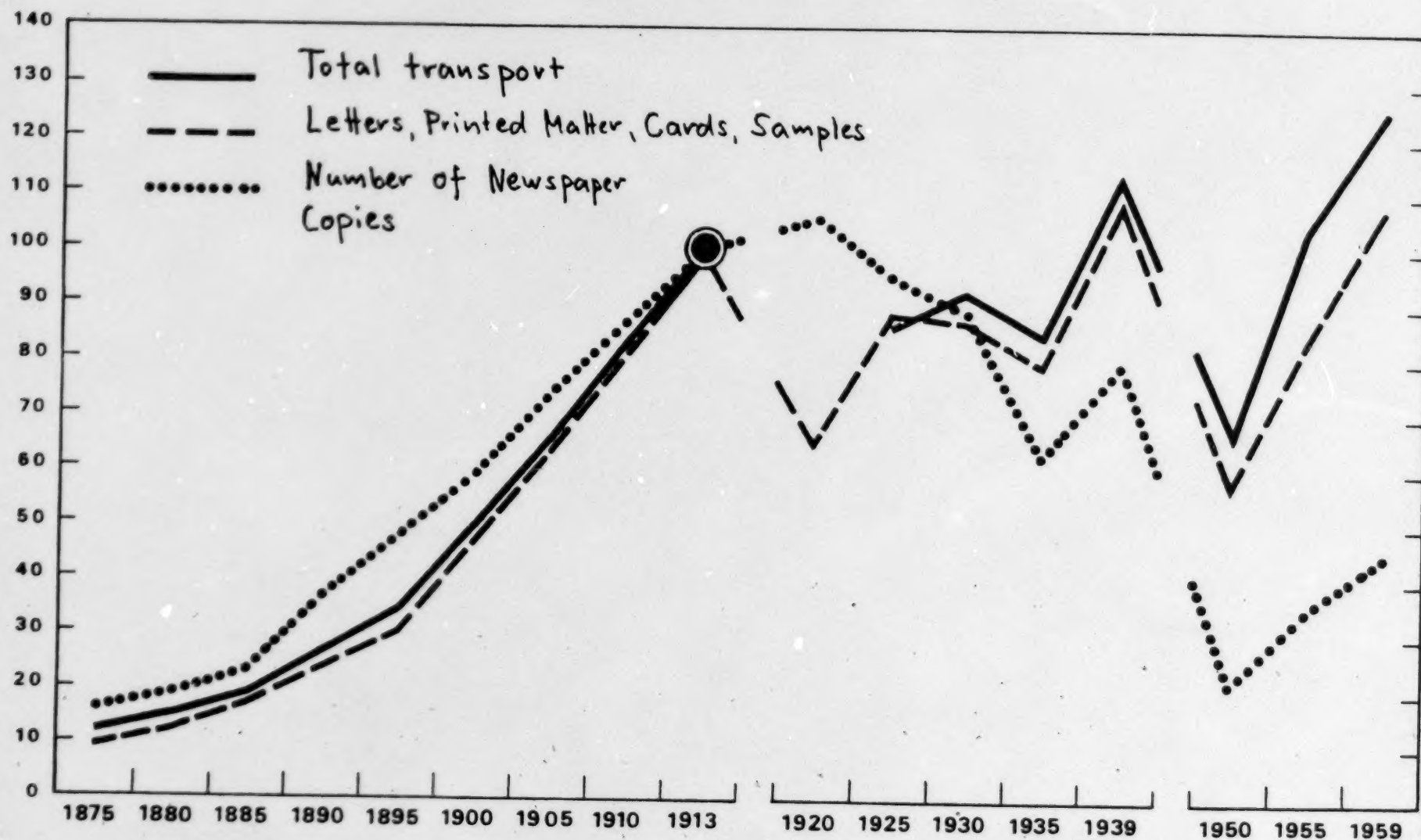
The developments over the last 25 years (1950-1975) reveal the constantly increasing difficult competitive position of the post office, especially if the more rapid development in the other economic spheres is kept in mind. During these years the dispatch of newspapers, favoured by special financial conditions grew more rapidly and constantly than the parcel service, which is more typical of the situation as a whole. At present the post office share in the distribution of daily newspapers is about 10%. The same applies in general to bulk printed matter. The very erratic development of book dispatch for which statistics are only available from 1964 is explained by special developments such as changes in the statistical method in postal rates. These figures are therefore not very revealing.

There are no statistically valid figures on the dispatch of newspapers by private long-distance transport firms. But it may be assumed that their share is steadily increasing. Chartering has become a rapidly growing new system.

Consumption and advertising

The development of private consumption as reflected in fairly long time series makes it possible to draw some conclusions on expenditure for education and recreation, and for a shorter period on expenditure devoted to the smaller sector

Figure 4 : Production in Transport and Communications: Development of the Transport of Printed Products compared with Transport as a Whole 1875 - 1959 (1913 = 100)



of printed products. In the period from 1875-1913, the development of private expenditure on education and recreation runs pretty well parallel to that of private expenditure as a whole. The above average increase at the beginning of the 1890's is undoubtedly explained by the availability of education and recreation spreading to broader sections of the population and encouraged by greater supply and increasing incomes. A first period of saturation follows in the next few years. The sudden upward leap after the First World War is connected with the desire to catch up with opportunities missed during the war years and with the fact that holiday periods became available for the first time to larger sections of the population. The expenditure on printed products also increased with unusual rapidity, but they certainly did not make such a large contribution towards the rapid growth of this sector as a whole as some of the other sub-groups of "education and recreation".

This conclusion is confirmed by the detailed figures on the proportion of private expenditure devoted to printed products. A modest growth began in 1926. The proportion spent on printed products was 0.57% at that time. The slump at the beginning of the Third Reich was due to various reasons; the subsequent recovery was due less to newspapers and magazines than to books (especially belles-lettres), as books always function to a certain extent as an escape valve during times of censorship. In the period after the Second World War, during which individual surveys of certain categories of household were made in the Federal Republic, the share almost doubled. It varies between 1.3% and 1.9%, depending on the category of household, but it is very constant in its overall development. The average over many years has been between 1.4% and 1.5%, which once again confirms the observation made earlier for the industry that the growth of printed products is a pretty good indicator of general development. The attitude towards books has long been considered a reliable criterion for judging spending attitudes as a whole.

Advertising, which plays a part in all the important media, is closely correlated to consumption. It is most important to the press, for which proceeds from ads are the main source of income. But radio and television also depend on advertising income for the financing of their general programmes. Advertising via the mass media has a concentrating effect in the industrial sectors dependent on advertising to expand their markets and on the privately structured press. Both the dependence on advertising and the tendency towards concentration create serious problems as far as freedom and variety of opinion are concerned.

Foreign trade

Foreign trade with printed products has been rather modest from the financial point of view in the more recent history of Germany and of the Federal Republic, but culturally it has always been of great importance. It always reflects the political, cultural and scientific rating of the German state. On the other hand, the German language sets a definite limit as this restricts the distribution to certain geographical areas or to groups capable of understanding the language. It is therefore understandable that a large part of this foreign trade is concentrated on Austria and Switzerland.

If we look at the historical development during the last 95 years it becomes clear that the relationship between imports and exports has remained substantially the same. The former takes up about a quarter as opposed to three-quarters for the latter. The importance of imports was greater especially during the early Nazi period when the "co-ordination" of the press and censorship were imposed more on exports, and during the period directly after the Second World War, when there was

a strong desire to catch up with what had been missed in the preceding years. The share of printed products in foreign trade as a whole has always been modest, with a few exceptions. Exports have run at a more or less constant 0.4% to 0.5% since 1925. The Third Reich period was again an exception, when the share of printed products rose in 1934 to a maximum of 0.9%, which was more as a result of the large drop in exports as a whole, and so was the period immediately after the Second World War, when the paper shortage made itself felt. The early years 1880-1913 show a relatively high proportion (1.7% in the years 1900 and 1905), which may be taken as sign of the fact that books were one of Germany's traditional export articles which were only gradually displaced by the attractive products offered by the rest of the industry. These years also show a higher import figure. In the following years, and right up to the present time, the share in imports remains amazingly constant at about 0.2%. Since 1952 there has been no change in this figure, so that it can be said that there has been a very close correlation between imports of printed products and total imports. Imports of printed products are thus a very good indicator for imports as a whole.

Economic indicators for the press and their importance for the economy as a whole

General conclusions

An important result of the study has been to make clear that the overall development of the press is a good indicator for the development of the economy as a whole, a fact that has no doubt been established elsewhere as well. This is particularly noticeable when the conditions for the press are largely positive as they are in the two phases noted above: "consolidation" and "stabilization at a new level". (see Table 1). The effects within the press, of a change of course in the economy vary as a whole. Newspapers seem to be less affected by a recession than magazines and books, and of these, the entertaining magazines come off best. If a recession lasts for a longer period, however, books and technical and professional magazines are relatively more in demand than the average consumer goods.

The position taken up by the Federal German press in the economy as a whole underlines the stability of the press (see Table 2 and Table 3). If one compares the figures for the present post-war period with those of earlier periods an amazing degree of agreement is found, even once the statistical inaccuracies of historical figures have been taken into consideration. The number of persons engaged in paper manufacturing and processing and in printing and allied trades averaged 3.6% of the total number employed in industry and the crafts for the years 1891-1900; this figure has scarcely changed today. In the years 1961 and 1970, the figures were 2.6% and 2.7% respectively, but this time as a proportion of persons engaged in the overall economy excluding agriculture. The concentration process has, however, had a disproportionate effect on the firms. While their share of the total was still 1.9% in 1961, it had dropped to 1.6% by 1970. This reduction primarily affected writers, journalists, lending libraries, reading circles and the intermediate trade.

The share in the total turnover increased slightly. It rose between 1962 and 1974 from 2.3% to 2.6%, but this was largely due to the disproportionate increase in paper prices and the consequent price increases for newspapers and entertaining magazines.

No exact conclusions can be drawn as to the contribution of the whole of the press to gross added value due to the lack of suitable statistical data. But certain indications can be found (see Table 4). If the two sectors "wood, paper, and printing" and science, art, education and journalism", are considered, one observes

that their share of the gross domestic product at 1970 prices decreased in the period from 1960 to 1974 from 4.7% to 4.1%. If the share of the first sector, which is more closely connected with the press, remained stable at 3.3%, then it can safely be concluded that the narrower press sector's share was just about 3% and was fairly stable.

Table 2: Number of firms and persons employed in the German press

Code number		Firm		absolute Employees		Firm		in % Employees	
		1961	1970	1961	1970	1961	1970	1961	1970
264	Cellulose, paper, and board manufacture	376	329	87525	76182	0.017	0.017	0.423	0.358
2656	Bookbinding	1408	1195	15050	16096	0.064	0.063	0.073	0.076
268	Printing, duplicating	8637	9587	261173	303801	0.394	0.502	1.261	1.429
4190	Wholesale trade in paper, and board	1571	1052	12070	10237	0.072	0.055	0.058	0.048
4196-99	Wholesale trade in books, magazines, music	867	655	15580	17563	0.040	0.034	0.075	0.083
4285	Intermediate trade in paper and printed products (excl. packaging)	5402	3023	8397	5520	0.247	0.158	0.041	0.026
43340	Retail trade in books, technical magazines, music	4381	4348	23375	27476	0.200	0.228	0.113	0.129
43545	Retail trade in other magazines, newspapers	3803	3260	9295	8388	0.174	0.171	0.045	0.039
7080	Publishing of books, technical magazines	1855	1568	28334	30364	0.085	0.082	0.137	0.143
7081	Publishing of newspapers and other magazines	812	771	52085	55440	0.037	0.040	0.252	0.261
7083	Other publishing	715	908	4419	7626	0.033	0.048	0.021	0.036
7085	Lending libraries, reading circles	3667	1031	10462	3521	0.167	0.054	0.051	0.017
7087	News agencies	323	223	2683	2520	0.015	0.011	0.013	0.012
7089	Writers, journalists	8345	3264	9595	4163	0.381	0.171	0.046	0.020
	The press ¹⁾ (total of above)	42182	31214	540043	568897	1.925	1.636	2.608	2.675
0 - -7	Total economy excl. agriculture	2191168	1908060	20706458	21264406	100.000	100.000	100.000	100.000

1) Including one-man businesses; the transport sector is not included; the figures for cellulose, paper, mechanical wood pulp, and board manufacture include the manufacture of materials not intended for use by the press (technological goods, packaging, hygiene), whose share in the total production in the years 1968, 1970, 1972 and 1974 is at 59, 50, 56 and 54 % respectively.

Source: Statistisches Bundesamt; Arbeitsstättenzählung of 27th May 1970.

Table 3

Total turnover¹⁾ of the W.German press²⁾ compared with the economy as a whole (in mill. DM)

Code number	Subdivision	1962	1964	1966	1968	1970	1972	1974
264	Cellulose, mechanical wood pulp, paper and board manuf.	5206	5956	7752	8075	10253	11568	15504
	prod. crafts	1	2	2	3	6	8	36
	other prod. trades	10	14	16	3	3	7	10
2656	Bookbinding	120	139	175	163	209	236	247
	prod. crafts	83	94	113	115	154	179	227
	other prod. trades	12	15	17	15	12	14	20
268	Printing and duplicating	6114	7135	7820	8161	10354	10302	12385
	prod. crafts	249	315	462	631	1023	1609	2533
	other prod. trades	277	230	322	409	382	363	389
41900	Wholesale in high-grade paper	1136	1247	1418	1562	1925	2179	3225
41960	Wholesale in books, scientific and techn. magazines	880	993	1240	1301	1447	1725	2244
41965	Wholesale in entertaining magazines and newspapers	224	339	477	659	831	1101	1402
4285	Intermediate trade of paper, paper goods, and printed products (excl. Packaging mat.)	146	171	212	162	444	400	476
43540	Retail in books, scientific and techn. magazines	780	905	1112	1082	1409	1803	2098
	Retail in entertaining magazines and newspapers	374	460	521	557	552	670	659
7080	Publishing of books, scientific, and techn. magazines	1827	2109	2492	2604	3306	3973	4495
7081	Publishing of newspapers and entertaining booklets	1260	1516	2238	3003	3799	5330	6105
7083	Other publishing activities	169	208	293	374	429	587	771
7085	Lending libraries and reading circles	219	269	172	171	184	188	188
7087	Clipping and news agencies	66	71	83	99	115	150	149
7089	Freelance writers and journalists	94	119	150	158	222	262	285
	Press (total of above)	19197	22307	27087	29407	37059	43044	53448
0 - 9	All tax-paying units of economy as a whole	828404	953910	1090474	1089327	1430400	1680632	2059684
1) Excl. small firms with turnovers below 12.000.-- DM.								
2) The transport sector is not included; the figures for cellulose, paper, mechanical wood pulp, and board manufacture include the manufacture of materials not intended for use by the press (technological goods, packaging, hygiene).								

Source: Statistisches Bundesamt: Umsatzsteuer.

Table 4:

Gross added value in selected branches compared with gross domestic product (mill. DM)

Code number		1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	
in 1970 prices																	
23	Wood, paper, and printing industry	Mio DM	14060	14670	15420	15460	16850	17960	17810	17920	19520	21560	22500	23280	24350	25880	25360
	%	3.3	3.3	3.3	3.2	3.3	3.3	3.2	3.2	3.3	3.4	3.3	3.3	3.3	3.4	3.3	3.3
	index	100	104	110	110	120	128	127	127	139	153	160	166	173	184	181	181
47	Science, art, education, and journalism	Mio DM	5980	6000	5890	5710	5830	6300	6240	6450	6500	6620	6720	6640	7090	6840	6530
	%	1.4	1.3	1.3	1.2	1.1	1.2	1.1	1.2	1.1	1.0	1.0	0.9	1.0	0.9	0.8	0.8
	index	100	100	98	95	97	105	104	108	109	111	112	111	119	114	109	109
66	Gross domestic product	Mio DM	428740	450580	470460	484500	517010	546120	559750	558840	593970	640460	678750	700680	726280	761840	765950
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	index	100	105	110	113	121	127	131	130	139	149	158	163	169	178	179	179
24	For comparison: textile industry	Mio DM	8370	8720	9250	9180	9640	10340	10510	9600	10720	11500	11450	11730	11530	10940	10720
	%	2.0	1.9	2.0	1.9	1.9	1.8	1.9	1.7	1.8	1.8	1.7	1.7	1.7	1.6	1.4	1.4
	index	100	104	111	110	115	124	126	115	128	137	140	137	140	138	131	128
in current prices																	
23	Wood, paper, and printing industry	Mio DM	9660	10750	12020	12340	13510	15030	15420	16010	17710	20120	22500	24980	27330	30290	32030
	%	3.2	3.2	3.3	3.2	3.2	3.3	3.2	3.2	3.2	3.3	3.4	3.3	3.3	3.3	3.3	3.2
	index	100	111	124	128	140	156	160	166	183	208	233	259	283	314	332	332
47	Science, art, education and journalism	Mio DM	3150	3320	3490	3600	3800	4340	4570	4880	5250	5820	6720	7230	8200	8650	9330
	%	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	1.0	0.9	0.9
	index	100	105	111	114	121	138	145	155	167	185	213	230	260	275	296	296
66	Gross domestic product	Mio DM	302800	331800	360880	382470	420280	459270	488340	494460	534900	596950	678750	754880	825990	918600	967130
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	index	100	110	115	126	139	152	161	163	177	197	224	249	273	303	326	326
24	For comparison: textile industry	Mio DM	6770	7590	7790	7680	8390	9220	9410	8370	9920	10990	11450	11910	11670	11430	12380
	%	2.2	2.3	2.2	2.0	2.0	2.0	1.9	1.7	1.7	1.9	1.8	1.7	1.6	1.4	1.3	1.3
	index	100	112	115	113	124	136	139	124	147	162	169	176	172	170	183	183

Source: Volkswirtschaftliche Gesamtrechnungen: Revidierte Ergebnisse
Statistisches Bundesamt: p. 113.

A SHORT SURVEY OF THE STUDYThe difficulty in transferring experiences in this field to developing countries

It would be virtually impossible to transfer the development of the mass media as described in the German Reich and in the Federal Republic of Germany to the developing countries. The different historical, geographical, cultural and industrial background means that not even the same fundamental conditions prevail. Added to this is the fact that in the developing countries the mass media all start from a position of equality. That is, the press, radio, and television are in many cases taken for granted right from the beginning as firm constituents of mass communication, whereas in Germany, the individual media came one after another in historical order and only gradually complemented and supplemented one another.

Another factor is technology, which has not only expanded tremendously in general terms during the last 100 years, but has also led to outstanding advances in the individual media. This technical progress, which had already advanced far by the period following the Second World War, the time most developing countries were just at the beginning of their politically independent existence, also created conditions which make any comparison with a time when technical advance was just gradually making itself felt in Germany illusory. The following will therefore attempt no more than (taking the example of a highly industrialized country) to describe the development and importance of the mass communication media in general terms; point out the factors that have led to the growth of the press in particular; show the share of the mass media in industry and trade; indicate what sections and numbers of the population are affected by the media; and how these media themselves are structured.

As the trend in most of the developing countries is to achieve as high a degree of industrialization as quickly as possible, it seems legitimate to take the stage of development of the mass media, in particular the press, in the Federal Republic of Germany as a criterion by which to measure the stage arrived at in the mass media, and again, the press in particular, in some developing countries.

Practical conclusions

There are opportunities for comparison in a number of areas. These include the production of newspapers, magazines and books, the number and technical equipment of papermaking factories and printing shops, the number of people employed, the number and structure of publishing houses and wholesalers, the transport system, and the degree to which readers make use of the facilities. Suitable figures for comparison on the radio, television, film, and advertising sectors are also provided in this study. But the results obtained are difficult to apply in view of the lack of detailed statistics in some developing countries. It will scarcely be possible to acquire as complete a statistical picture of mass communication as in the Federal Republic of Germany in a Third World country without considerable preliminary effort in the form of random tests and field research.

The present study provides a pattern of indicators (see Table 5) which can prove useful in surveying the situation of the mass media.⁽¹⁾ It includes both

(1) Some of these indicators have already been applied regularly by Unesco for Member States.

important characteristics of the individual media and various economic aspects directly connected with them.

On the basis of this pattern it can be checked whether selected developing countries possess relevant data or whether random tests will have to be carried out or secondary indicators used.

In order that this data can be correctly classified, additional detailed information defining the framework of any mass communication system must be obtained. This pattern of general indicators is given in Table 6. Not until these sectors have been investigated, at least to a certain extent, is there any possibility of obtaining a fairly complete picture of mass communications in any particular country. The example of the Federal Republic of Germany, where data on these sectors are relatively complete, clarifies to what extent each of these sectors is essential to the development of the others.

A further result of this study is the observation that the press, especially in combination with the paper manufacturing and processing sectors, is very closely correlated to general economic growth. It would therefore be interesting to verify whether this also applies to individual developing countries.

In doing so, the indicators for mass communication would have to be correlated to relevant economic indicators such as GNP, industrial production, trade, private consumption, etc. If such correlations led to positive results then two possibilities would emerge:

on the one hand an increase of GDP could be determined on the basis of assumptions concerning the development of the press production;

on the other hand the development of press production (financial requirements, infrastructure etc.) might be estimated according to projections of GDP.

These calculations could be taken as a base for determining the minimum essentials for the planning of the mass communication system for the State X for the year 2000.

Another interesting aspect is the strong correlation between imports of printed products and total imports. Subsequent studies in developing countries should consider this aspect, particularly, since imports are a decisive factor for development and measurement and forecast criteria are of particular interest.

Proposals for follow-up studies:

In view of the necessary statistical data and of the need for a relatively good basis for comparison with the highly industrialized countries analysed here, it would certainly be desirable to restrict any subsequent studies to developing countries with a relatively high level of industrialization. The ideal would be selection of four or five countries which vary geographically, ideologically, and culturally, but which do not differ greatly in size from the Federal Republic of Germany. While the geographical and cultural criteria are relatively easy to ascertain, and the GNP and size of population are rather reliable guides as to whether a comparable degree of industrialization has been arrived at, the ideological differences, which have a decisive effect on mass communication and the economic order, are more difficult to establish. The following points have been used here as a means of differentiating:

Table 5:

Pattern of Indicators for Mass Media

I. PRINTING	
1. <u>Newspapers:</u>	- Development of newspaper proceeds, costs and profits per newspaper per month on a yearly average - Development of distributor, advertising and other proceeds per newspaper per month on a yearly average - Development of the average subscription price - Development of the sold circulation of the daily press - Structural data on the development of the daily press
2. <u>Magazines:</u>	- Circulation development of magazines - Development of the retail price of selected magazine groups
3. <u>Books:</u>	- Title production - Average selling prices and average paper prices for the title production
4. <u>Industrial Aspects (Paper and Printing Industry)</u>	- Firms - Employers - Manhours - Wages and salaries - Gross plant investments - Net industry production - Use of capacity - Energy consumption - Structure of machinery park - Turnover - Factor costs
5. <u>Commercial Aspects</u>	- Publishing Houses - Book shops - Wholesale - Intermediate Trade - Retail Trade - Firms - Employers - Turnover
6. <u>Transport Aspects</u>	- Post - Private firms - Volume - Turnover
7. <u>Foreign Trade</u>	- Imports - Exports - Volume - Structure - Countries of origin and destination
8. <u>Consumption</u>	- Saturation, classified by newspapers, magazines, and books - Private owned books by volume average - Yearly expense for books, newspapers and magazines, classified by household structure - Libraries (number, distribution and frequentation)
II. BROADCASTING AND TELEVISION	
- Degree of saturation of households with radio and television - Structural data on the economic development of broadcasting - Development of television programme time - Development of the average cost per transmission minute - Total revenue from Broadcasting Licence Fees - Development of expenditure of the Broadcasting Establishments	
III. FILM	
- Development of the feature film production - Co-produced feature films - Cinema attendance - Permanent cinemas and number of seats - Cinema gross and net income - Companies, employees and turnover in the Film Industry	
IV. ADVERTISING	
- Gross advertising turnover of the most important advertising media - Development of the proportion of advertising in subscription newspapers - Development of the average price per page of advertising and the price per thousand of the four most important magazine groups - Gross turnover of commercial television	

Table 6: Pattern of general indicators

I. Economy:

Resources in manpower and materials, extent of leisure time available, capital invested, number of persons gainfully employed, number of firms, their distribution among the three production sectors, technological standard, gross domestic product

II. Culture:

Linguistic situation, literature, the pictorial arts, music, advertising, film, architecture, sports

III. Ideology:

Religion, national consciousness, tradition, racial breakdown, classes, pressure groups, the state of democracy and of the political parties

IV. Society:

Family, rank, people, minorities, social structures, education, health and living conditions, problems concerning work, leisure, and tourism

V. The state:

The legislative and executive structure, justice, planning and regional authorities, economic policies

VI. Science:

The humanities and arts, the sciences, economics, society, technology

VII. Communications:

Road, rail, water, air, the postal services and - beside the mass media - telephone, telex, posters, public meetings, and exhibitions.

Centrally administered economic system of the Communist type: for example Viet Nam.

Mixed system with central economic administration elements predominant: for example Algeria.

Mixed system with elements of central economic administration and of free competition: for example Pakistan and Egypt.

Mixed systems with free competitive elements predominant (free enterprise, private property); for example Mexico, Argentina, Columbia, the Philippines, Thailand, South Korea, Nigeria and Kenya.

In all cases the figures applying to the Federal Republic of Germany could be taken as a basis for comparison. Some of these comparisons may make it necessary to conduct further surveys in the Federal Republic of Germany. What would also be interesting to consider is whether another highly industrialized country like France for example, should be studied as the Federal Republic of Germany has been in this study, to determine the position of the mass media in its economy as a whole.

Altogether the present study has revealed certain tendencies and interrelationships, for which affecting parameters ought to be investigated in further studies. But in any case, this present study can only be regarded as a beginning which calls for further investigations and will only be complete when these have been carried out.